

Name _____

STUDY GUIDE Chapter 11: Genetics

BE SURE TO REVIEW YOUR GENETICS PROBLEMS AS WELL!

1. Genetics is the study of _____, which is the biological inheritance of traits. The “father of genetics” was _____, as he demonstrated the inheritance of certain traits in pea plants.
2. The unit by which hereditary characteristics are transmitted from parent to offspring is a _____. Various forms of a gene are called _____. The _____ allele is expressed when present in one copy, while the _____ allele’s expression can be masked by another allele.
3. _____ individuals have 2 different alleles of a gene while _____ individuals have 2 identical alleles of a gene. The allele combination in an individual that causes particular traits or disorders is called its _____ and the expression of a gene in traits or symptoms is its _____.
4. A monohybrid cross results in a phenotypic ratio of _____ while a dihybrid cross results in a phenotypic ratio of _____.
5. Mendel’s law of _____ states that the alleles of a gene are distributed into separate gametes during _____. Mendel’s law of _____ states that the inheritance of a gene on one chromosome _____ influence the inheritance of a gene on a different chromosome.
6. Inheritance in which both alleles are fully expressed is called _____. Inheritance where neither allele is dominant, resulting in a “blending” of alleles, is called _____. Inheritance in which a gene has more than 2 **alleles** is classified as having _____. A trait controlled by 2 or more **genes** is considered _____.
7. Y-linked traits are rare and are passed from _____ to _____. There is NO male to male transmission in _____ linked traits.
8. In autosomal dominant inheritance, _____ autosomal allele causes a phenotype. It can affect _____ and _____ and does not skip generations. An example of a disease/disorder caused by autosomal dominant inheritance is _____.
9. In autosomal recessive inheritance, _____ autosomal alleles are required to cause a phenotype. It can affect _____ and _____ and can skip generations through _____. Autosomal recessive disorders tend to be more severe and produce symptoms earlier in life than autosomal dominant disorders. An example of a disease/disorder caused by autosomal recessive inheritance is _____.
10. X-linked dominant inheritance is much severe in _____. It is passed from the male to all _____ but to no _____. In X-linked recessive inheritance, males only need _____ recessive allele to express the trait while females need _____. Sons inherit the trait from an affected or heterozygous _____. Daughters who inherit the trait must have an affected _____.